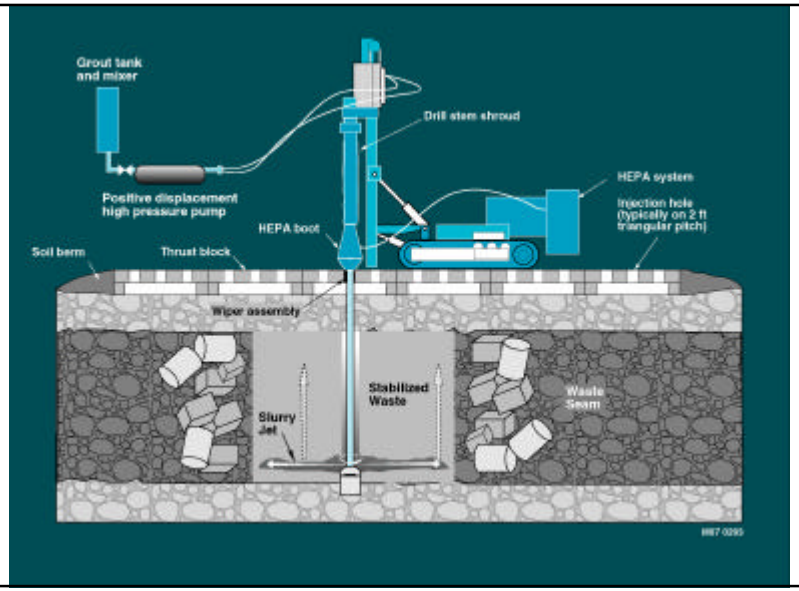
In Situ Stabilization

Description

The INEEL has developed an innovative in situ stabilization technology. This technology involves the injection of a hardening agent into a zone of environmental concern. It can be used on contaminated soils and buried debris, including materials containing hazardous, radioactive, and transuranic waste. This technology can create an area that is impervious to water migration.

Application

- Long term stabilization of wastes. This system can immobilize contaminants without removal, decrease permeability, reduce leaching, and provide physical stabilization for improved cap performance
- Interim stabilization of wastes for subsequent retrieval. The technology reduces risk and costs associated with removal through dust control.
- Barrier walls. These allow retrieval of specific hot spots from within a waste area and impede contaminant migration.



Development Status:

- INEEL has completed field demonstrations of all three applications using a variety of grout materials.
- CERCLA Treatability Study completed September 1997 at an INEEL mixed waste site.
- A patent is currently pending on various aspects of the technology.
- The INEEL is looking for licensees interested in commercializing the technology.